

CLAIMS

- 1/ A cable having a substantially gastight metal tube receiving at least one optical conductor and a hydrogen-absorbent substance, wherein the inside face of the tube is covered, at least in part, with a layer of a catalyst substance for catalyzing the reaction whereby the hydrogen-absorbent substance absorbs hydrogen, said layer itself being covered, at least in part, with at least one layer of the hydrogen-absorbent substance.
- 2/ A cable according to claim 1, in which the layer of catalyst substance is rough.
- 3/ A cable according to claim 2, in which the layer of catalyst substance is provided with grooves.
- 4/ A cable according to claim 1, in which the tube is provided over at least a portion of its outside surface with a protective layer which serves to protect it against corrosion and which substantially comprises the same catalyst substance as that of the layer present on its inside surface.
- 5/ A cable according to claim 1, in which the hydrogen-absorbent substance comprises at least one polymer.
- 6/ A cable according to claim 5, in which said polymer is chosen from the group formed by ethylene vinyl acetate and by ethylene ethyl acrylate.
- 7/ A cable according to claim 5, in which said polymer has double bonds which open in the presence of the catalyst so as to fix hydrogen on the open double bonds.
- 8/ A cable according to claim 1, in which the catalyst comprises an element from group VIII, periods 4, 5, and 6, of the periodic table of the elements.

9/ A cable according to claim 8, in which the catalyst comprises nickel or chromium.

5 10/ A cable according to claim 1, in which the gastight tube is made of mild steel.

11/ A cable according to claim 1, in which the hydrogen-absorbent substance constitutes a filler material for
10 filling the tube.

12/ A cable according to claim 1, in which the hydrogen-absorbent substance forms merely a layer deposited on the layer of catalyst substance.

15 13/ A cable according to claim 12, in which the layer of hydrogen-absorbent substance has adhesive properties.

14/ A method of manufacturing a cable according to claim
20 11, in which, starting from a strip of metal covered over its inside surface with the catalyst substance, the strip of metal is formed so as to impart the shape of a tube to it, the optical conductor(s) and a filler material are inserted into the tube, and the formed tube is swaged
25 after it has been welded.

15/ A method of manufacturing a cable according to claim
12, in which, starting from a strip of metal covered over its inside surface with the catalyst substance, with the
30 catalyst substance being itself covered with a hydrogen-absorbent substance, the strip of metal is formed so as to impart the shape of a tube to it, by mutually overlapping the longitudinal margins of the strip of metal, and the overlapping margins are glued.

35 16/ A method according to claim 15, in which the layer of hydrogen-absorbent substance is used for the gluing.